

Having thus described the invention, what is claimed is:

1. A horizontal form, fill and seal machine comprising:

a film drive for longitudinally moving a sheet of packaging film from a film supply to a forming box, said forming box having an open inlet end, an open outlet end, a top and opposed side walls;

a pair of guide bars respectively adjacent said side walls and extending in a downstream direction beyond said outlet end; and

a conveyor extending from said forming box outlet end between said guides, wherein said forming box includes film forming surfaces for guiding a longitudinal center portion of said packaging film along a surface of said forming box top and guiding longitudinal side marginal portions of said film about said guide bars and onto said conveyor to form a product receiving surface.

2. The horizontal form, fill and seal machine in accordance with claim 1 wherein said conveyor extends to a sealing station downstream of free ends of said guide bars and said forming box is inclined with respect to said conveyor with said inlet end above said outlet end, whereby product fed through said forming box is deposited onto said product receiving surface.

3. The horizontal form, fill and seal machine in accordance with claim 1 further comprising:

a longitudinal slit in said conveyor and sealing bars disposed on opposite sides of said slit whereby longitudinal edges of said packaging film marginal portions passing through said slit may be sealed together to form an envelope.

4. The horizontal form, fill and seal machine in accordance with claim 2 wherein a pair of sealing bars are provided downstream of said conveyor, said seal bars being respectively positioned above and below said film envelope for joining a top portion of said envelope to a bottom portion of said envelope.
5. The horizontal form, fill and seal machine in accordance with claim 1 further comprising a zipper attachment mechanism disposed in the path of said packaging film between said packaging film supply and said forming box.
6. The horizontal form, fill and seal machine in accordance with claim 5 wherein said zipper attachment mechanism attaches a strip of zipper to said film transverse to the direction of longitudinal movement of said packaging film.
7. The horizontal form, fill and seal machine in accordance with claim 5 wherein said zipper attachment mechanism attaches said zipper to said film in the direction of longitudinal movement of said packaging film.
8. The horizontal form, fill and seal machine in accordance with claim 1 wherein each of said guide bars includes a first roller for contacting said longitudinal side marginal portions of said film, each of said rollers having an axis perpendicular to the longitudinal axis of the conveyor.

9. The horizontal form, fill and seal machine in accordance with claim 8 wherein said first rollers are disposed at downstream ends of their respective guide bars.
10. The horizontal form, fill and seal machine in accordance with claim 9 wherein each of said guide bars includes a second roller upstream of said first rollers.
11. The horizontal form, fill and seal machine in accordance with claim 1 wherein said guide bars are generally semi-circular.
12. The horizontal form, fill and seal machine in accordance with claim 1 wherein said guide bars include means for adjusting the heights thereof.
13. A method of forming packaging on a horizontal form, fill and seal machine comprising:
moving a sheet of packaging film longitudinally from a film supply to a forming box,
said forming box having an open inlet end, an open outlet end, a top, opposed side walls and a pair of guide bars respectively adjacent said side walls and extending in a downstream direction from said outlet end; and
guiding a longitudinal center portion of said packaging film along the interior of said forming box top and guiding longitudinal side marginal portions of said film about said guide bars and onto a conveyor to form a product receiving film surface on said conveyor.

14. The method in accordance with claim 13 wherein said conveyor extends to a sealing station downstream of free ends of said guide bars, said forming box is inclined with respect to said conveyor with said inlet end above said outlet end, and comprising the further step of feeding product through said forming box onto said product receiving surface.
15. The method in accordance with claim 13 wherein said conveyor includes a longitudinal slit comprising the further step of feeding longitudinal edges of said packaging film marginal portions passing through said slit and sealing said longitudinal edges together to form an envelope.
16. The method in accordance with claim 15 comprising the further step of forming spaced cross seals along said envelope transversely joining a top portion of said envelope to a bottom portion of said envelope.
17. The method in accordance with claim 16 wherein product is intermittently deposited on said product receiving surface and a cross seal is formed after each deposit of product.
18. The method in accordance with claim 13 comprising, at a location between said packaging film supply and said forming box, the further step of attaching a strip of zipper to said packaging film.
19. The method in accordance with claim 18 wherein said strip of zipper is attached to said packaging film transverse to the direction of longitudinal movement of said packaging film.

20. The method in accordance with claim 18 wherein said zipper is attached to said packaging film in the direction of longitudinal movement of said packaging film.

21. A horizontal form, fill and seal machine comprising:

a drive mechanism for longitudinally moving a sheet of packaging film from a film supply to a horizontal conveyor;

a horizontal conveyor;

a pair of guide bars extending in a moving direction of said conveyor respectively on opposite sides of said conveyor, said conveyor extending in a downstream direction of movement of the sheet beyond said guide bars;

a guide in the path of movement of the sheet having surfaces for directing longitudinal side marginal portions of the sheet about said guide bars and onto said conveyor to form a product receiving surface on the conveyor and for directing a longitudinal central portion of the sheet over said product receiving surface;

a product dispenser for dispensing a product onto the conveyor between the product receiving surface and the longitudinal central portion of the moving sheet;

a first sealer downstream of a downstream end of said conveyor disposed to transversely seal the longitudinal central portion of the moving sheet to the product receiving surface; and

a second sealer upstream of said first sealer for sealing together longitudinal edges of the moving sheet.

22. A method of forming packages on a horizontal form, fill and seal machine comprising:

longitudinally moving a sheet of packaging film from a film supply to a horizontal conveyor; said conveyor having a pair of guide bars extending in a moving direction of said conveyor respectively on opposite sides of said conveyor, said conveyor extending in a downstream direction of movement of the sheet beyond said guide bars;

directing longitudinal side marginal portions of the sheet about said guide bars and onto said conveyor to form a product receiving surface on the conveyor;

directing a longitudinal central portion of the sheet over said product receiving surface;

dispensing a product onto the conveyor between the product receiving surface and the longitudinal central portion of the moving sheet;

at a location downstream of the downstream end of the conveyor, transversely sealing the longitudinal central portion of the moving sheet to the product receiving surface; and

at a location upstream of the downstream end of the conveyor sealing the longitudinal edges of the moving sheet together.